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## **Laura Di Gesu: Blazars from the new observational window of X-ray polarimetry: the first year of IXPE observations of blazars**

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The NASA/ASI Imaging X-ray Polarimetry Explorer (IXPE) was launched on December 9, 2021 thereby opening the new observational window of X-ray polarimetry. Blazars, which are active galactic nuclei (AGN) where the jet is oriented towards the observer, are prime candidates for X-ray polarization observations. In particular, a high degree of X-ray polarization is expected from high energy peaked blazars (HBL) in the case of synchrotron radiation produced in an ordered magnetic field. Moreover, we expect different time variability patterns of the X-ray and radio/optical polarization properties depending on which physical mechanism energizes the particles in the jets, e.g. shock acceleration, magnetic reconnection in a kink unstable jet, or turbulence in the flow. We report on the first year of IXPE observations of HSP blazars and we discuss what X-ray polarimetry is teaching us about the inner physics of jets.